MASSEY (G.B.)

The Electrical Treatment of Fibroid Tumors.

Read before the Third Annnal Meeting of the American Electro-Therapeutic Association, held in Chicago, Sept. 12, 13 and 14, 1893.

BY G. BETTON MASSEY, M.D.
PHILADELPHIA, PA.

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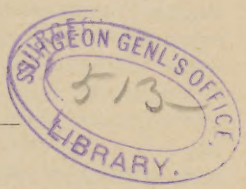

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THE ELECTRICAL TREATMENT OF FIBROID TUMORS.

The invitation to participate in this year's discussion on the electrical treatment of fibroid tumors was a most welcome one, as it is a subject of daily interest to me. To those among you equally interested in it with myself, the annual recurrence of this discussion suggests far more than the threshing over of old straw; it suggests rather a new harvest of ideas and practical points, to which each of us may contribute our sheaf of information.

Before referring to the special points arranged for the discussion I shall allude to the

VALUE OF EARLY DIAGNOSIS AND TREATMENT OF INCIPIENT FIBROSIS.

This convention should call the attention of the profession to the importance of an early diagnosis and early treatment of this condition.

Case after case of large growths are referred to us, but where are the little ones? Each large growth has been small at one time, though its presence has as a rule been unnoted until its relatively large bulk called attention to it physically. Its earlier manifestations were possibly slight, since I have known some tumors attain the dimensions of a small cocoa-nut without giving rise to symptoms, but it is more likely that the earlier symptoms were mistaken for something else. I do not doubt but that there are scores of women to-day in this city with undiscovered fibrous nodules within the uterine substance varying from the size of a pea to a hickory nut, who are under treatment by gynecologists for such supposed affections as displacements, chronic metritis, menorrhalgia, menorrhagia, laceration of the cervix, cellulitis and ovarian disease. I know this mistake is being made by reputedly good diagnosticians, and the evidence is

contained in the histories of my cases, nearly all of whom were treated for some one of these conditions during the first three to ten years of the tumor's growth. Corroborative evidence has even been furnished by myself, in the discovery that in several cases in which an enlarged uterus had been diagnosed as chronic metritis or subinvolution, galvanic treatment led to a shrinkage of the organ everywhere but in one spot, where a small tumor was then evident.

These small growths should be searched for in obscure cases of pelvic pain, uterine enlargement, etc., and the patient placed promptly under electrical treatment when they are discovered, thereby saving her from years of misery, and at best a more prolonged treatment.

The early treatment of these tumors can not be other than advantageous as compared with late treatment. Their incipiency and smaller size are decided helps to a method that acts only by inducing retrogressive changes; yet there is another reason for early diagnosis and early treatment. All fibroid tumors are amenable to electricity in their early stages, while some, by reason of degenerative changes in the later stages of their growth, become finally unfit for it.

This slurring over the diagnosis of fibroid growths is probably due in part to the former attitude of the profession which looked on the affection as neither requiring radical measures for surgical relief, nor amenable to any other form of treatment. Patients were simply told to wait for the menopause, in the hope that change of life would bring relief. Surgeons at the present day pay but little attention also to small incipient growths, for patients at this stage seldom consent to an operation. To the electrical worker, only, the early discovery of fibroid growths is of interest, not to mention the paramount importance of early discovery to the patient to whom it may mean a still existent possibility of relief from electricity that would not be possible after time had permitted a degeneration of the growth.

1. *Hemorrhage.*—Of eighty cases under my care thirty-four have been hemorrhagic. Other cases had been troubled with this symptom at previous dates in their history, but thirty-four were markedly hemorrhagic at the inception of the treatment, some of them being in dangerously weakened

conditions because of the extreme loss of blood. Each one of the thirty-four were cured of this symptom, so far as my investigations into their after condition can reach. In some of the cases a prolonged treatment was necessary to insure this result, but I have been fortunate in obtaining the co-operation of the patients in most instances. By prolonged treatment I mean an active treatment of three or four months, followed by a more desultory series of applications for three months or a year longer. During the continuance of the active treatment, frequent applications are made in order that an alterative effect may be obtained throughout the cavity. This sometimes temporarily aggravates the flow, or at least leads to a constant dribbling, but it is essential in order that a control of the case may be obtained. The desultory treatment following is applied twice or once a month, and like the earlier applications is very thorough, using from 100 to 200 milliampères. Sectional carbon electrodes are used when they can be inserted at first, but after the hemorrhagic feature has been somewhat controlled I prefer to use an elastic cotton-covered electrode as causing less irritation to the cavity. The active pole is invariably positive.

I have never yet been compelled to dilate the cervix to facilitate the insertion of an electrode, and would regard such a necessity as a confession of inexpertness.[1]

A recent case of a large hemorrhagic growth was so exsanguinated and weakened as to be brought in a chair. There was a history of a recent pelvic inflammation, and the temperature on admission to the Sanatorium varied between 101 and 102, indicating the possibility of peri-uterine mischief. Notwithstanding this contra-indication to electricity something had to be done, and it was soon seen that currents of 100 milliampères were well borne. During a period of rest following the active treatment the periods became almost normal, eight pounds in weight were gained and the health greatly improved. The treatment was given in this case to

[1] Since writing the above, I have been compelled to use the dilator to insert an electrode within the os in a case of atresia caused by the improper placing of the electrode by a previous attendant. He had simply cauterized the mouth of a cavity that was four inches deep and capacious.

a lady continuously confined in bed, with an evening temperature varying from 99.5 to 101, with excellent results. The temperature became normal under the treatment.

This case has been specially mentioned, as it is decidedly against the rule to apply such currents during the existence of temperature variations of that extent. The wisdom of neglecting the rule in that particular case was verified by the results, but it should be borne in mind that the applications were tentatively begun, most closely watched, and prosecuted under the most favorable conditions for careful work.

2 *and* 3. *Pain and Pressure Symptoms* were present in nearly all of the cases treated and were among the earliest accompaniments of the tumors to disappear under treatment. The symptomatic cure was complete in seventy-two cases out of eighty. Of the eight failures, one was an extremely large growth in the abdomen, hanging pendulous above the pelvic brim and totally inaccessible by the vagina. Further treatment by abdominal puncture is contemplated. One case, a cystic, intra-uterine growth, succumbed to sepsis. Another was subperitoneal, loosely attached to the uterus and inaccessible to treatment. The remaining five cases fell into surgical hands after the more or less complete failure of electricity to relieve, and only one survived the operation of removal. Of these cases thus operated upon I consented to the operation in two, and the other three were operated upon either against my will or without my knowledge, and the operations were in my opinion totally inadvisable.

4. *Strength and Nutrition.*—The general health was completely restored in each of the seventy-two symptomatic cures.

5. *The Growth* was affected as follows in the seventy-two cases:

a. Arrest	10
b. Retrogression	49
c. Disappearance	7
d. Recurrence	1
e. No change	13

6. *Kind of Current.*—A continuous milliampère current has

been employed in all cases, varying in strength from 30 to 400 milliampères, usually from 50 to 150. The rapidly successive induction currents from powerful primary faradic coils were used in a few muscular myomas, resulting in temporary but distinct contractions of the growths. The galvanic currents only have seemed to yield permanent results, though at present I frequently employ faradic currents simultaneously by means of a combiner, and am convinced that they do much to relieve patients of the, at times, unpleasant sensations accompanying and following the galvanic applications.

7. *Properties of the Current.—a.* Electrolytic. The mode of action of electricity on fibroid tumors embraces other elements of value than mere electrolysis. Electrolytic disturbance of tissue cells is probably the prime cause of arrest and regression of these growths, but it should by no means be supposed that the mode of action is by the electrical decomposition of the growth into acids and bases. This occurs to some extent, but by far the greater part of the growth is removed by an apparent quickening of the metamorphic and sorbefacient processes, and this quickening will be found by experience to be not necessarily correlated in degree with the degree of electrolytic decomposition induced. Relatively weak currents, in other words, will accomplish more change in some cases than stronger ones. Another practical application of this fact enjoins us to exercise care not to nullify or interfere with the post-operative effects of one application by giving another too soon afterwards.

b. Cataphoric. I have had no practical experience with the cataphoric administration of medicaments in fibroids, but aside from this possibly fruitful question, I may say that electric osmosis is an important factor in the Apostoli treatment. The positive pole, for instance, checks hemorrhage largely by drying the tissues within the region of its polarity. With a strong current this desiccation may extend some distance from the point of contact, a whole tumor being partly deprived of its moisture, which is carried through the tissues towards the negative pole. The desiccation immediately beneath a small electrode surface is at

times so great when strong currents are employed that a very powerful battery is required to keep up a sufficient current strength through the rapidly increasing resistance at this point. At the negative pole there is an increase of moisture in all galvanic applications in exact proportion to the loss at the positive pole. This physical fact renders it easier to maintain the current strength from a weak voltage when the negative pole is a small active surface; the current tends in fact, to creep upwards after being turned on to a certain point. Another practical application of the fact is the value of the negative pole in maintaining drainage from the uterus and in promoting the menstrual flow.

9. *Dosage.*—As before mentioned, the currents in my work have varied from 30 to 400 milliampères by the monopolar method, usually averaging from 50 to 150. The doses, are on the whole, smaller than I used at first, as it is my practice to be satisfied with moderate progress if unaccompanied by irritation. In an intra-uterine, sessile, vasculo-cystic tumor recently destroyed successfully by bipolar electrolysis I employed as much as 700 milliampères repeatedly in conjunction with continuous irrigation.

Polarity.—No cases were treated exclusively by one pole, except the distinct vascular growths, in which the positive pole was rigidly adhered to. Other growths were treated mainly by the negative application within the uterus.

Length of Seance.—The duration of each application has been from three to ten minutes, usually three.

Frequency of Application.—Twice a week or once a week is the usual rule of frequency, daily vaginal applications being interspersed by preference. In the latter stages of prolonged cases one treatment a month has been the rule.

Duration of the Treatment.—My cases have been under active treatment from six weeks to six months, with periods of desultory treatment usually added, lasting three months to three years longer.

Contra-indications.—Cystic growths, purulent accumulations within the adnexæ.